

m. Roos

A12



RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/467,368

DATE: 09/17/2002
TIME: 14:22:11

Input Set : N:\Crf3\RULE60\09467368.raw
Output Set: N:\CRF4\09172002\I467368.raw

SEQUENCE LISTING

3 (1) GENERAL INFORMATION:
 5 (i) APPLICANT: Hansen, Peter Kamp
 6 Wagner, Peter
 7 Mullertz, Anette
 8 Knap, Inge Helmer
 10 (ii) TITLE OF INVENTION: Animal Feed Additives
 12 (iii) NUMBER OF SEQUENCES: 2
 14 (iv) CORRESPONDENCE ADDRESS:
 15 (A) ADDRESSEE: Novo Nordisk of North America, Inc.
 16 (B) STREET: 405 Lexington Avenue
 17 (C) CITY: New York
 18 (D) STATE: NY
 19 (E) COUNTRY: USA
 20 (F) ZIP: 10174
 22 (v) COMPUTER READABLE FORM:
 23 (A) MEDIUM TYPE: Diskette
 24 (B) COMPUTER: IBM Compatible
 25 (C) OPERATING SYSTEM: DOS
 26 (D) SOFTWARE: FastSEQ for Windows Version 2.0
 28 (vi) CURRENT APPLICATION DATA:
 C--> 29 (A) APPLICATION NUMBER: US/09/467,368
 C--> 30 (B) FILING DATE: 21-Dec-1999
 31 (C) CLASSIFICATION:
 34 (vii) PRIOR APPLICATION DATA:
 35 (A) APPLICATION NUMBER: US/08/886,765
 36 (B) FILING DATE: 1-JUL-1997
 38 (viii) ATTORNEY/AGENT INFORMATION:
 39 (A) NAME: Lambiris, Elias J
 40 (B) REGISTRATION NUMBER: 33,728
 41 (C) REFERENCE/DOCKET NUMBER: 4324.204-US
 43 (ix) TELECOMMUNICATION INFORMATION:
 44 (A) TELEPHONE: 212-867-0123
 45 (B) TELEFAX: 212-878-9655
 47 (2) INFORMATION FOR SEQ ID NO: 1:
 49 (i) SEQUENCE CHARACTERISTICS:
 50 (A) LENGTH: 983 base pairs
 51 (B) TYPE: nucleic acid
 52 (C) STRANDEDNESS: single
 53 (D) TOPOLOGY: linear
 55 (ii) MOLECULE TYPE: cDNA
 57 (vi) ORIGINAL SOURCE:
 58 (A) ORGANISM: Thermomyces lanuginosus

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59 (B) STRAIN: DSM 4109
61 (ix) FEATURE:
62 (A) NAME/KEY: CDS
63 (B) LOCATION:31..705
65 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
67 TCGGCCCGAC GTCTTGCAT CCTTGCAGTG ATG GTC GGC TTT ACC CCC GTT GCC 54
68 Met Val Gly Phe Thr Pro Val Ala
69 1 5
71 CTT GCG GCC TTA GCC GCG ACT GGG GCC CTG GCC TTC CCG GCA GGG AAT 102
72 Leu Ala Ala Leu Ala Ala Thr Gly Ala Leu Ala Phe Pro Ala Gly Asn
73 10 15 20
75 GCC ACG GAG CTC GAA AAG CGA CAG ACA ACC CCC AAC TCG GAG GGC TGG 150
76 Ala Thr Glu Leu Glu Lys Arg Gln Thr Thr Pro Asn Ser Glu Gly Trp
77 25 30 35 40
79 CAC GAT GGT TAT TAC TAT TCC TGG TGG AGT GAC GGT GGA GCG CAG GCC 198
80 His Asp Gly Tyr Tyr Ser Trp Trp Ser Asp Gly Gly Ala Gln Ala
81 45 50 55
83 ACG TAC ACC AAC CTG GAA GGC GGC ACC TAC GAG ATC AGC TGG GGA GAT 246
84 Thr Tyr Thr Asn Leu Glu Gly Gly Thr Tyr Glu Ile Ser Trp Gly Asp
85 60 65 70
87 GGC GGT AAC CTC GTC GGT GGA AAG GGC TGG AAC CCC GGC CTG AAC GCA 294
88 Gly Gly Asn Leu Val Gly Gly Lys Gly Trp Asn Pro Gly Leu Asn Ala
89 75 80 85
91 AGA GCC ATC CAC TTT GAG GGT GTT TAC CAG CCA AAC GGC AAC AGC TAC 342
92 Arg Ala Ile His Phe Glu Gly Val Tyr Gln Pro Asn Gly Asn Ser Tyr
93 90 95 100
95 CTT GCG GTC TAC GGT TGG ACC CGC AAC CCG CTG GTC GAG TAT TAC ATC 390
96 Leu Ala Val Tyr Gly Trp Thr Arg Asn Pro Leu Val Glu Tyr Tyr Ile
97 105 110 115 120
99 GTC GAG AAC TTT GGC ACC TAT GAT CCT TCC TCC GGT GCT ACC GAT CTA 438
100 Val Glu Asn Phe Gly Thr Tyr Asp Pro Ser Ser Gly Ala Thr Asp Leu
101 125 130 135
103 GGA ACT GTC GAG TGC GAC GGT AGC ATC TAT CGA CTC GGC AAG ACC ACT 486
104 Gly Thr Val Glu Cys Asp Gly Ser Ile Tyr Arg Leu Gly Lys Thr Thr
105 140 145 150
107 CGC GTC AAC GCA CCT AGC ATC GAC GGC ACC CAA ACC TTC GAC CAA TAC 534
108 Arg Val Asn Ala Pro Ser Ile Asp Gly Thr Gln Thr Phe Asp Gln Tyr
109 155 160 165
111 TGG TCG GTC CGC CAG GAC AAG CGC ACC AGC GGT ACC GTC CAG ACG GGC 582
112 Trp Ser Val Arg Gln Asp Lys Arg Thr Ser Gly Thr Val Gln Thr Gly
113 170 175 180
115 TGC CAC TTC GAC GCC TGG GCT CGC GCT GGT TTG AAT GTC AAC GGT GAC 630
116 Cys His Phe Asp Ala Trp Ala Arg Ala Gly Leu Asn Val Asn Gly Asp
117 185 190 195 200
119 CAC TAC TAC CAG ATC GTT GCA ACG GAG GGC TAC TTC AGC AGC GGC TAT 678
120 His Tyr Tyr Gln Ile Val Ala Thr Glu Gly Tyr Phe Ser Ser Gly Tyr
121 205 210 215
123 GCT CGC ATC ACC GTT GCT GAC GTG GGC TAAGACGTAA CCTGGTGGTG 725
124 Ala Arg Ile Thr Val Ala Asp Val Gly

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125	220	225															
127	ATCTCGCGAG	GCAACAGCCA	AGAATGTCGT	CAGATGTGCC	GGTTGAAGGT	ATTCAATCAG	785										
129	CATATCTGTC	TGCCCTTGCG	AGTGATACTT	TGGAGGACTG	TGGAGAACTT	TGTGCGAGCC	845										
131	TGGCCAGGAT	CAGTAGTTGC	TTTGCGGTGT	TTTGCCTCCCT	ATTCTCGTGA	AAAAATTGTT	905										
133	ATTGCTTCGT	TGTCTAGTGT	ACATAGCCGA	GCAATTGAGG	CCTCACGCTT	GGGAAAAAAA	965										
135	AAAAAAAAAA	AAAAAAA					983										
137	(2) INFORMATION FOR SEQ ID NO: 2:																
139	(i) SEQUENCE CHARACTERISTICS:																
140	(A) LENGTH: 225 amino acids																
141	(B) TYPE: amino acid																
142	(D) TOPOLOGY: linear																
144	(ii) MOLECULE TYPE: protein																
146	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:																
148	Met	Val	Gly	Phe	Thr	Pro	Val	Ala	Leu	Ala	Leu	Ala	Ala	Thr	Gly		
149	1						5			10				15			
151	Ala	Leu	Ala	Phe	Pro	Ala	Gly	Asn	Ala	Thr	Glu	Leu	Glu	Lys	Arg	Gln	
152							20			25				30			
154	Thr	Thr	Pro	Asn	Ser	Glu	Gly	Trp	His	Asp	Gly	Tyr	Tyr	Tyr	Ser	Trp	
155							35			40				45			
157	Trp	Ser	Asp	Gly	Gly	Ala	Gln	Ala	Thr	Tyr	Thr	Asn	Leu	Glu	Gly	Gly	
158						50			55				60				
160	Thr	Tyr	Glu	Ile	Ser	Trp	Gly	Asp	Gly	Gly	Asn	Leu	Val	Gly	Gly	Lys	
161						65			70			75			80		
163	Gly	Trp	Asn	Pro	Gly	Leu	Asn	Ala	Arg	Ala	Ile	His	Phe	Glu	Gly	Val	
164						85			90			95					
166	Tyr	Gln	Pro	Asn	Gly	Asn	Ser	Tyr	Leu	Ala	Val	Tyr	Gly	Trp	Thr	Arg	
167						100			105			110					
169	Asn	Pro	Leu	Val	Glu	Tyr	Tyr	Ile	Val	Glu	Asn	Phe	Gly	Thr	Tyr	Asp	
170						115			120			125					
172	Pro	Ser	Ser	Gly	Ala	Thr	Asp	Leu	Gly	Thr	Val	Glu	Cys	Asp	Gly	Ser	
173						130			135			140					
175	Ile	Tyr	Arg	Leu	Gly	Lys	Thr	Thr	Arg	Val	Asn	Ala	Pro	Ser	Ile	Asp	
176	145					145			150			155			160		
178	Gly	Thr	Gln	Thr	Phe	Asp	Gln	Tyr	Trp	Ser	Val	Arg	Gln	Asp	Lys	Arg	
179						165			170			175					
181	Thr	Ser	Gly	Thr	Val	Gln	Thr	Gly	Cys	His	Phe	Asp	Ala	Trp	Ala	Arg	
182						180			185			190					
184	Ala	Gly	Leu	Asn	Val	Asn	Gly	Asp	His	Tyr	Tyr	Gln	Ile	Val	Ala	Thr	
185						195			200			205					
187	Glu	Gly	Tyr	Phe	Ser	Ser	Gly	Tyr	Ala	Arg	Ile	Thr	Val	Ala	Asp	Val	
188						210			215			220					
190	Gly																
191	225																

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/467,368

DATE: 09/17/2002
TIME: 14:22:12

Input Set : N:\Crf3\RULE60\09467368.raw
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L:29 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:30 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]